

AMENDMENTS TO THE CLAIMS

Claims 1-24. (Cancelled)

25. (New) A method for assisting a person in controlling one or more devices or processes, comprising the steps of:

- a) attaching a vibration sensor, capable of detecting mechanical vibrations, either
 - i. on the person's head; or
 - ii. under the skin over a bony mastoid process or over a temporomandibular joint;
- b) detecting with the sensor, mechanical vibrations elicited by sudden contact of the person's upper teeth and lower teeth;
- c) generating an electrical signal from the sensed mechanical vibrations; and
- d) transmitting the electrical signal to the one or more devices or processes to be controlled.

26. (New) The method according to claim 25, wherein the sensor is attached on a side of the person's head.

27. (New) The method according to claim 26, wherein the sensor is attached on the side of the person's head over a bony mastoid process or over a temporomandibular joint.

28. (New) The method according to claim 26, wherein the sensor is attached on the side of the person's head at a location to sense the mechanical vibrations of the person's bony mastoid process.

29. (New) The method according to claim 26, wherein the sensor is attached on the side of the person's head at a location to sense the mechanical vibrations of the person's temporomandibular joint.

30. (New) The method according to claim 27, wherein the sensor is an accelerometer or a microphone.

31. (New) The method according to claim 25, wherein the sensor is an accelerometer.

32. (New) The method according to claim 27, wherein the sensor is an accelerometer.

33. (New) The method according to claim 32, wherein the sensor is attached on the side of the person's head for detecting the vibrations using one or more attachment devices selected from the group consisting of an adhesive, an adhesive tape, an elastic headband, a spring loaded headpiece, and a pair of glasses with springy arms.

34. (New) The method according to claim 31, wherein steps (b), (c) and (d) take place in an encapsulation under the skin.

35. (New) The method according to claim 33 or 34, wherein in step (d) the electrical signal is transmitted to an electronic controller adapted to produce an output signal to control the one or more devices or processes.

36. (New) The method according to claim 35, wherein the device being controlled is one capable of stimulating movement of a body part of the person.

37. (New) The method according to claim 35, wherein the device being controlled is one capable of stimulating muscles or nerves.

38. (New) The method according to claim 35, wherein the device being controlled is selected from the group consisting of an active orthosis, a prosthesis, a cuff capable of stimulating the muscles in the person's forearm, an electronic device and a computer.

39. (New) The method according to claim 35, wherein the device being controlled is a cuff equipped with electrodes that stimulate muscles in the person's forearm.

40. (New) The method according to claim 38, wherein the controller discriminates a temporal pattern or intensity from the electrical signal, and generates a corresponding output signal to control the one or more devices or processes.

41. (New) The method according to claim 38, further comprising amplifying the electrical signal.

42. (New) The method according to claim 41, further comprising filtering the electrical signal to attenuate signals corresponding to vibrations unrelated to tooth clicks.

43. (New) The method according to claim 42, wherein the controller includes a logic circuit to recognize selectively tooth click related components of the electrical signal.

44. (New) The method according to claim 43, wherein the output signal is directed to a signal generator that generates trains of electrical pulses operative to stimulate muscles or nerves.

45. (New) The method according to claim 44, wherein in step (d) the electrical signal or the output signal is transmitted using a wire, wireless or fibre optic transmitter or a passive transponder, and wherein the controller includes a receiver capable of receiving the transmitted electrical signal.

46. (New) An apparatus for assisting a person in controlling one or more devices or processes, comprising:

a vibration sensor capable of detecting mechanical vibrations elicited by sudden contact of the person's upper teeth and lower teeth and of generating an electrical signal from the sensed mechanical vibrations for transmitting to the one or more devices or processes to be controlled; and either:

i. an attachment device for attaching the vibration sensor externally on the person's head for detecting the mechanical vibrations; or

ii. an encapsulation for the sensor for placement under the skin over a bony mastoid process or over a temporomandibular joint.

47. (New) The apparatus according to claim 46, wherein the attachment device is adapted to attach the sensor on a side of the person's head.

48. (New) The apparatus according to claim 47, wherein the attachment device is adapted to attach the sensor on the side of the person's head over the bony mastoid process or over the temporomandibular joint.

49. (New) The apparatus according to claim 47, wherein the attachment device is adapted to attach the sensor on the side of the person's head at a location to sense the mechanical vibrations of the person's bony mastoid process.

50. (New) The apparatus according to claim 47, wherein the attachment device is adapted to attach the sensor on the side of the person's head at a location to sense the mechanical vibrations of the person's temporomandibular joint.

51. (New) The apparatus according to claim 48, wherein the sensor is an accelerometer or a microphone.

52. (New) The apparatus according to claim 46, wherein the sensor is an accelerometer.

53. (New) The apparatus according to claim 48, wherein the sensor is an accelerometer.

54. (New) The apparatus according to claim 53, which further comprises means for transmitting the electrical signal to the one or more devices or processes to be controlled.

55. (New) The apparatus according to claim 54, wherein the attachment device is selected from the group consisting of an adhesive, an adhesive tape, an elastic headband, a spring loaded headpiece, and a pair of glasses with springy arms.

56. (New) The apparatus according to claim 52, further comprising means for transmitting the electrical signal to the one or more devices or processes to be controlled, and wherein the encapsulation is for the sensor and the means for transmitting the electrical signal.

57. (New) The apparatus according to claim 55 or 56, which further comprises an electronic controller adapted to receive the transmitted electrical signal and to produce an output signal to control the one or more devices or processes.

58. (New) The apparatus according to claim 57, wherein the device being controlled is one capable of stimulating movement of a body part of the person.

59. (New) The apparatus according to claim 57, wherein the device being controlled is one capable of stimulating muscles or nerves.

60. (New) The apparatus according to claim 57, wherein the device being controlled is selected from the group consisting of an active orthosis, a prosthesis, a cuff capable of stimulating the muscles in the person's forearm, an electronic device and a computer.

61. (New) The apparatus according to claim 57, wherein the device being controlled is a cuff equipped with electrodes that stimulate muscles in the person's forearm.

62. (New) The apparatus according to claim 60, wherein the controller discriminates a temporal pattern or intensity from the electrical signal, and generates a corresponding output signal to control the one or more devices or processes.

63. (New) The apparatus according to claim 60, further comprising an amplifier for amplifying the electrical signal.

64. (New) The apparatus according to claim 63, further comprising a filter for filtering the electrical signal to attenuate signals corresponding to vibrations unrelated to tooth clicks.

65. (New) The apparatus according to claim 64, wherein the controller includes a logic circuit to recognize selectively tooth click related components of the electrical signal.

66. (New) The apparatus according to claim 65, wherein the output signal is directed to a signal generator that generates trains of electrical pulses operative to stimulate muscles or nerves.

67. (New) The apparatus according to claim 66, wherein the means for transmitting is a wire, wireless or fibre optic transmitter or a passive transponder, and wherein the controller includes a receiver capable of receiving the transmitted electrical signal.

68. (New) The apparatus according to claim 56, wherein the means for transmitting is a wireless transmitter or a passive transponder, and wherein the electronic controller includes a receiver capable of receiving the transmitted electrical signal.